

SECTION C Descriptions and Specifications

SECTION C - DESCRIPTION/SPECIFICATION/WORK STATEMENT**PART 1 - CONTRACT LINE ITEM DESCRIPTION**

1. This contract is for the production, assembly, testing, and delivery of Plastics Waste Processing (PWP) equipment and spare parts for installation onboard US Navy ships. The Offeror shall use the latest revision of drawings cited below for all PWP equipment. The procurement of the Mod. I PWP equipment and spare parts will consist of some combination of the following:

- a) Mod. I Compress Melt Units, (CLINs 0003, 0013, 0022, 0031, and 0040), in accordance with paragraph 3.a below.
- b) Mod. I Compress Melt Units, utilizing Government Furnished Material, consisting of castings only, (CLIN 0004), (Please note: This item may be ordered only in Year 1 of the contract), in accordance with paragraph 3.b below.
- c) Mod. I Compress Melt Units Utilizing Government Furnished Material (GFM) (CLINs 0005, 0014, 0023, 0032, and 0041), in accordance with paragraph 3.c below.
- d) Auxiliary Units, Auxiliary Unit Gratings, and Daily Cleaning Placards (CLINs 0006, 0015, 0024, 0033, and 0042), in accordance with paragraph 3.d below.
- e) Mod. I Plastics Shredder Chamber Assemblies Utilizing GFM and Installation Kits (CLINs 0007, 0016, 0025, 0034, and 0043), in accordance with paragraph 3.e below.
- f) Mod. I Plastics Shredder Chamber Assemblies Installation Kits, (CLINs 0008, 0017, 0026, 0035, and 0044) in accordance with to paragraph 3.f below.
- g) Auxiliary Components, (CLINs 0009, 0018, 0027, 0036, and 0045), in accordance with to paragraph 3.g below.
- h) Disk Storage Bins, (CLINs 0010, 0019, 0028, 0037, and 0046), in accordance with to paragraph 3.h below.
- i) CLCU Cover Gratings, (CLINs 0011, 0020, 0029, 0038, and 0047), in accordance with paragraph 3.i below.

2. The Electrical Enclosure Mounting Adapter, dwg 593-7556805, will not be procured as part of this contract.

3. The following is a description of each item listed in paragraph 1:

- a) The Mod. I Compress Melt Unit(s) (CMU) shall be manufactured in accordance with NAVSEA Top Level Drawing No. 593-7556810, piece numbers 1, 3, 4, 5, 6, and 7, and all drawings referenced thereon, including all tiered references. For each Mod. I CMU

ordered, two (2) each of pieces 6 and 7 will be delivered. The contractor shall utilize the Government furnished software to program the Programmable Logic Controllers for each Mod. I CMU. The software will be provided in the form of a master PROM chip.

- b) The Mod. I Compress Melt Unit(s) (CMU), utilizing Government Furnished Material (GFM) in the form of the castings listed in paragraph 7(a) below, shall be manufactured in accordance with NAVSEA Top Level Drawing No. 593-7556810, piece numbers 1, 3, 4, 5, 6, and 7, and all drawings referenced thereon, including all tiered references. For each Mod. I CMU ordered, two (2) each of pieces 6 and 7 will be delivered. The contractor shall utilize the Government furnished software to program the Programmable Logic Controllers for each Mod. I CMU. The software will be provided in the form of a master PROM chip. The contractor shall utilize the GFM to manufacture and assemble the Mod. I Compress Melt Units.
- c) The Mod. I Compress Melt Unit(s) (CMU), utilizing GFM, shall be manufactured in accordance with NAVSEA Top Level Drawing No. 593-7556810, piece numbers 1, 3, 4, 5, 6, and 7, and all drawings referenced thereon, including all tiered references. For each Mod. I CMU ordered, two (2) each of pieces 6 and 7 will be delivered. The contractor shall utilize the Government furnished software to program the Programmable Logic Controllers for each Mod. I CMU. The software will be provided in the form of a master PROM chip. The contractor shall utilize GFM to manufacture and assemble the Mod. I Compress Melt Units. The GFM to be provided are listed in Attachment 1.
- d) The Auxiliary Unit(s) (AU) shall be manufactured in accordance with NAVSEA Top Level Drawing No. 593-7556810, piece number 2 and all drawings referenced thereon, including all tiered references. The Auxiliary Unit Grating(s) shall be manufactured in accordance with NAVSEA Drawing No. 593-7556806. The CMU Daily Cleaning Placard(s) shall be manufactured in accordance with NAVSEA Drawing No. 593-755-6804. One Auxiliary Unit Grating and one CMU Daily Cleaning Placard will be provided for each AU that is delivered.
- e) The PWP Mod. I Plastics Shredder Chamber Assembly Installation Kit(s), utilizing GFM, shall be manufactured in accordance with NAVSEA Drawing No. 593-7556874 Assembly 97, and all drawings referenced thereon, including all tiered references. The Installation Kit shall include items from NAVSEA Drawing No. 593-7556874 Assembly 98 (pieces 7 through 18 and 21 through 29) and Assembly 99 (pieces 19 and 20). These items shall be packaged separately from the chamber assembly and marked accordingly. Each item contained in the kit shall also be individually packaged and labeled. The contractor shall utilize GFM to manufacture and assemble the PWP Mod. I Plastics Shredder Chamber Assembly. The GFM to be provided are listed in Attachment 2.
- f) The PWP Mod. I Plastics Shredder Chamber Assembly and Installation Kit(s) shall be manufactured in accordance with NAVSEA Drawing No. 593-7556874 Assembly 97, and all drawings referenced thereon, including all tiered references. The

Installation kit shall include items from NAVSEA Drawing No. 593-7556874 Assembly 98 (pieces 7 through 18 and 21 through 29), and Assembly 99 (pieces 19 and 20). These items shall be packaged separately from the chamber assembly and marked accordingly. Each item contained in the kit shall also be individually packaged and labeled.

- g) Auxiliary Components shall consist of those items identified on Attachment 3. All spare parts furnished hereunder shall be interchangeable with the comparable part of the working Government furnished prototype and all production systems delivered. Interchangeability certifications shall be furnished as required in accordance with CDRL A004 of the attached DD Form 1423.
- h) The Disk Storage Bin(s) shall be manufactured in accordance with NAVSEA Drawing No. 593-7556808 Assembly 99, and all drawings referenced thereon, including all tiered references.
- i) The CLCU Cover Grating(s) shall be manufactured in accordance with NAVSEA Drawing No. 593-7556806 Assembly 98, and all drawings referenced thereon, including all tiered references.

4. Testing shall be performed on all hardware listed in paragraphs 3a through 3i in accordance with Attachment 4 and top-level assembly drawings.

5. The list of drawings to be used for the manufacture and assembly of the Mod. I CMU, AU, Mod. I Plastic Shredder (PS) Chamber Assembly installation kits, auxiliary components, and disk storage bins is provided in Attachment 5.

PART 2 - GENERAL REQUIREMENTS

1. The nameplates for Mod. I Plastics Shredder Chambers, Mod. I Compress Melt Units, Auxiliary Units, and CMU Rear Electrical Enclosure Assemblies shall indicate the serial number for the components. Serial numbers shall be sequential starting with the number 0001 for the first component of each equipment type. The serial number will be comprised of four elements.

Title	Position	Symbol	Explanation
Contractor designation	1	Upper case alpha-character	Letter designation for the Contractor to be assigned by NSWCCD at a later date.
Sequence Number	2-5	Numeric	Example: 0001. The first unit of any component will begin with 0001.
Equipment Type	6	Upper case alpha-character	Letter designation for the equipment. P - Plastic shredder C - CMU A - AU
Component Designation	7	Upper case alpha-character	Letter designation for the component. Q - equipment (CMU, AU, Shredder) E - electrical control enclosure
Examples: R0001CQ is the serial number for the first CMU manufactured by Contractor R. R0010CE is the tenth CMU electrical enclosure manufactured by Contractor R.			

2. The suppliers listed on the drawings are known suppliers. There may be other suppliers. The Contractor may utilize any suitable supplier. However, the Contractor must advise the Procuring Contracting Officer (PCO) in writing if the supplier to be utilized is not listed on the applicable drawing(s). Documentation that demonstrates form, fit, function, and interchangeability must accompany each notification.

3. The Contractor shall implement a quality assurance program that is in accordance with at least a tailored version of ISO 9002 (1994), Quality Systems - Model for Quality Assurance in Production and Installation identified below. A DRAFT copy of the Quality Assurance Plan (CDRL A004) shall be submitted for Government review no later than 30 days after issuance of the first Delivery Order. The Government has 30 days for review/approval. The FINAL copy with Government review comments incorporated shall be submitted no later than 15 days after receipt of Government review comments. The following distribution statement shall be printed on the title page of the document and apply: Distribution Statement "C". Distribution authorized to U.S. Government Agencies and their contractors. Administrative or Operational Use, (month)(Year) for example Dec 2003. Other requests for this document shall be referred to NAVSEA 05M4. Technical data shall be marked with "Distribution Statement C," Distribution authorized to U.S. Government agencies and their contractors. The following sections of ISO 9002 (1994) shall be invoked in order to meet the minimum quality assurance requirements and each area shall be addressed in the Quality Assurance Plan:

4.2 Quality System

4.2.1 General

4.2.2 Quality-System Procedures

4.5 Document and Data Control

4.5.1 General

4.5.2 Document and Data Approval and Issue

4.5.3 Document and Data Changes

4.6 Purchasing

4.6.1 General

4.6.4.2 Customer Verification of Subcontracted Product

4.7 Control of Customer-Supplied Product

4.9 Process Control

4.10 Inspection and Testing

4.10.1 General

4.10.2 Receiving Inspection and Testing

4.10.3 In-Process Inspection and Testing

4.10.4 Final Inspection and Testing

4.10.5 Inspection and Test Records

4.11 Control of Inspection, Measuring, and Test Equipment

4.11.1 General

4.11.2 Control Procedure

4.12 Inspection and Test Status

- 4.13 Control of Nonconforming Product
 - 4.13.1 General
 - 4.13.2 Review and Disposition of Nonconforming Product
- 4.14 Corrective and Preventive Action
 - 4.14.2 Corrective Action
- 4.16.1 Control of Quality Records

4. The Contractor shall establish and implement an appropriate configuration management plan. ISO 10007:2003 should be used as guidance. The plan shall require the use of Engineering Change Proposals (ECPs) (IAW CDRL A007), Value Engineering Change Proposals (VECPs), and Requests for Deviations (RFD) (IAW CDRL A008), submitted for Government approval. Request for Waivers (RFW) shall be submitted for Government approval, as appropriate. Documentation that demonstrates form, fit, function, and interchangeability must accompany each ECP, VECP, RFD or RFW submitted for Government approval. All RFW must include notation on the cause and corrective action, and a recommended disposition. In addition, the Contractor shall identify any changes to the technical manual resulting from any proposed ECP, VECP, RFD, or RFW. Any equipment or component change may also be required to undergo testing. Any ECP, VECP, RFD or RFW submitted must also consider the cost of integrated logistics support (ILS) changes to the Government, which are approximately as follows: \$0.5 K for each part change, \$3K for each new Allowance Parts List (APL), and \$1K for each technical manual change page. At the Government's election, any such proposed ECP, VECP, RFD, or RFW shall be presented at a mutually agreeable time to the cognizant Government quality assurance representative (QAR) and/or Naval Sea Systems Command (NAVSEA). This may occur at the scheduled monthly progress meeting. (See Paragraph 13 below).

5. Testing of the initial production equipment shall be witnessed by the Government prior to delivery. Testing will be in accordance with Attachment 4.

6. GFP/GFI: The following items will be provided to the contractor by the Government to assist the contractor with any manufacturing problems that may arise. These will be returned to the Government at the end of this contract.

PWP Mod. I System Assembly	Dwg: 593-7556810 Assy 99
PWP Mod. I Plastic Shredder Chamber Assembly	Dwg: 593-7556871 Assy 99
Disc Storage Bin	Dwg: 593-7556808 Assy 99
Allowance Parts List for PWP Mod. I System	
PWP Mod. I Technical Manual	
PWP Mod. I Plastic Waste Shredder Technical Manual	

7. Castings

Foundry molds, including special tooling, for the following items have been made previously for these parts by the companies listed below. Use of the companies listed below may result in lower costs and shorter delivery dates.

(a) The following parts can only be made from castings:

- (i) Plastic Processor Lower Frame: Dwg 593-7556814

- Sturm Inc.
1305 Main Street
Barboursville, WV 25504
800-624-3485
- (ii) Plastic Processor Chamber: Dwg 593-7556822
- Mansfield Brass and Aluminum
636 Center Street
New Washington, OH 44844-9417
419-492-2166
- (iii) CMU Ram: Dwg 593-7556818
- Durex Industries
190 Detroit Street
Cary, IL 60013-2979
847-639-5600
- (iv) CMU Door: Dwg 593-7556817
- Durex Industries
190 Detroit Street
Cary, IL 60013-2979
847-639-5600
- (v) Ram Adapter: Dwg 593-7556821
- Effort Foundry
6980 Chrisphalt Drive
Bath, PA 18014
610/837-1837
- (vi) Shock Mount: Dwg 593-7556825
- Effort Foundry
6980 Chrisphalt Drive
Bath, PA 18014
610/837-1837
- (vii) Door Jam Breaker Bar: Dwg 593-7556830
- Effort Foundry
6980 Chrisphalt Drive
Bath, PA 18014
610/837-1837
- (viii) CMU Door Hinge Bracket: Dwg 593-7556832
- Sturm Inc.
1305 Main Street
Barboursville, WV 25504
800-624-3485
- Universal Technologies, Inc.
PO Box 640, 165 Alsonia Street

Estill Springs, TN 37330
931-649-5171

Penn State Tool and Die
7590 Route 30
Huntingdon, PA 15642
724-864-2626

(b) The following parts may be made by castings or machining.

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|--|---------------------------------------|
| (i) Locking Lug: | Dwg 593-7556811 pc 40 |
| (ii) Bracket, Hinge Pin: | Dwg 593-7556812 pc 4 |
| (iii) Pivot Lug: | Dwg 593-7556812 pc 17 |
| (iv) Shredder Chamber Upper
and Lower Bearing Housings: | Dwg 593-7556871 pcs 8, 9, 20,
& 21 |

8. Assignment and use of National Stock Numbers - To the extent that National Stock Numbers (NSNs) or Navy Item Control Numbers (NICN) are assigned by the Government for the identification of parts, pieces, items, subassemblies, or assemblies to be furnished under this contract, the Contractor shall use such NSNs or preliminary NSNs in the preparation of package labels, packing lists, shipping containers, and shipping documents as required by applicable specifications, standards, or Data Item Descriptions of the contract or as required by orders for spare parts. The cognizant Government Contract Administration Office shall be responsible for providing the contractor such NSNs or preliminary NSNs which may be assigned and which are not already in the possession of the contractor. The contractor shall also change any NICNs to permanent NSNs on labels of any parts or assemblies that are still within their possession and on subsequent parts or assemblies if instructed by the Government.

9. The Contractor shall implement Configuration Management in accordance with ISO 10007:2003. Implementation of the following Department of Defense forms is required:

Engineering Change Proposal (ECP) DD Form 1692 APR 92, pg. 1-6
Request for Deviation/Request for Waiver DD Form 1694 APR 92
Notice of Revision (NOR) DD Form 1695 APR 92

No ECP will be considered by the Government unless the contractor has demonstrated operability and interchangeability of the desired substitution. Operability and Interchangeability shall be demonstrated by inserting the desired substitution into the Government furnished prototype and completing the requirements of the Contractor's Configuration Management Plan, and or the Contractor's Engineering Release Records and Correlation of Manufactured products, as appropriate. At the Government's election, any such proposed ECPs shall be demonstrated at a mutually agreeable time to the cognizant ACO and/or NSWCCD.

9.1 Requests for Engineering Change Proposals (ECP) shall be prepared in contractor format. The ECP content shall be in accordance with DD Form 1692, Apr 92.

9.2 Requests for Notice of Revision (NOR) shall be prepared in contractor format. The Notice content shall be in accordance with DD Form 1695, Apr 92.

10. Requests for Waivers (RFW) shall be prepared in contractor format. The RFW content shall be in accordance with DD Form 1694, Apr 92.

11. Delivery of the first article test report shall be in accordance with clause 52.209-3. Delivery of the first article test report may be waived at the Government's discretion. The contractor shall deliver the items fabricated for the first article test, which are specified under CLIN 0001 of Section B, not later than 30 days following receipt of the Government's written approval of the first article test report. Specific delivery requirements will be specified in individual delivery orders.

12. Shipping requirements and destinations will be specified on individual delivery orders for each piece of equipment and/or spare parts and auxiliary components. The equipment will be shipped on a Government Bill of Lading (F.O.B. Origin).

13. Technical Conferences/Meetings

a. Contractor and Government representatives shall have technical conferences/meetings on a monthly basis to review progress and address any manufacturing or design issues arising from the execution of this contract. For the first 6-months, following the issuance of the first delivery order, meetings will be held at the contractor's facility. Thereafter, conferences may be held either by phone, teleconference, at the contractor's facility or at the Naval Surface Warfare Center, Carderock Division, West Bethesda, MD (NSWCCD) at the Government's discretion. However, no more than six (6) meetings will be held at NSWCCD.

b. The substance of monthly meetings will consist of the following types of items:

- * Discussion and review of the machining of the castings.

- * Review and dispensation of waivers, deviations, and engineering change proposals (VECP or ECP).

- * Discussion and resolution of drawing and manufacturing issues related to successful manufacturing of equipment.

- * Review and resolution of quality assurance and configuration control problems.

- * Discussion and resolution of parts and material availability issues.

- * The development of action items arising from the above discussion and tracking of their resolution.

- * The identification of issues that may require action by the contracting officer.

c. A Critical Production Review (CPR) may be conducted approximately thirty (30) days prior to the issuance of the first delivery order under CLINs 0003 through 0012. This may or may not supersede the regular monthly meeting. This

meeting will take place at the contractor's facility. The purpose of the CPR is to assure the Government that the contractor will deliver ordered items on schedule while meeting all technical requirements.

14. Warranty

The contractor's Standard Commercial Warranty shall apply to all items delivered under the contract.